



TECHNICAL DATA SHEET

URETHANE 645™

A revolutionary, solvent based urethane coating designed to repel chemicals and abrasions available in a clear or colored high gloss finish. The Urethane 645 is a solvent based, two component polyester/aliphatic polyurethane coating designed to coat concrete floors combining the highest quality of aliphatic urethane components. The Urethane 645 provides incredible abrasion resistance and chemical resistance. Recommended for indoor areas with high risks of exposure to chemical spills, fuel, heavy equipment, extreme temperatures and any other potentially damaging situation the substrate may encounter.

APPLICATIONS

Exceptional when used for:

- Applications: Garages, shop floors, warehouses
- Substrates: Concrete

Not for use on:

- For interior use only

BENEFITS

- Excellent hardness
- Excellent durability
- May be used as a topcoat or stand-alone product
- Stops dusting
- Protects from chemical spills
- Superior abrasion resistance
- UV Stable
- Will form an excellent bond to concrete
- Scratch resistant
- Excellent flexibility
- Available clear or colored

PREPARATION

Avoid contact with skin, eyes and clothing. Wash hands after use and do not take internally. Please refer to the product Safety Data Sheet (SDS) before using. The preparation process should be followed to ensure adequate penetration and optimum performance:

Step 1: The concrete substrate must be structurally sound, thoroughly dry and clean.

Step 2: Remove all paints, previous sealers and/or adhesives before application.

Step 3: The substrate must be clean of oil, grease, dirt, wax, curing compounds, efflorescence and other contaminants that might interfere with the penetration of the sealer.



TECHNICAL DATA SHEET

Step 4: For a one or two coat thin build system (3-10 mils dry) we recommend either mechanical scarification or acid etching until a suitable profile is achieved. For a complete system build higher than 10 mils dry, we recommend a fine brush blast (shot blast). If acid is used to clean the concrete, neutralize the surface completely and rinse it with water prior to application. Then wait for the concrete to dry out for at least 24-48 hours.

Step 5: The surface-zone moisture content of the concrete should not exceed 4%wt. A test should be made to determine that the concrete has an appropriate vapor barrier. This can be done by placing a 4'X4' plastic sheet on the substrate and taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate does not show signs of eventual hydrostatic pressure problems that may later cause disbanding.

Step 6: Cover all surrounding areas not intended to be coated.

Step 7: New concrete must be cured for at least 28 days before sealing.

MIXING

This product comes pre-packaged by weight. Kits should be mixed in their entirety. This product has a two to one mix ratio by volume- merely mix two gallons of part A with 1 gallon part B. Urethane 645 A and Urethane 645 B should be thoroughly mixed before combining. Scrape the bottom and sides of each container. Urethane 645 A and Urethane 645 B can then be combined (Urethane 645 is sold as a pre-packaged kit and Urethane 645 Part A should be mixed in its entirety with Urethane 645 Part B). After the two parts are combined, mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. Avoid whipping air into the coating. Improper mixing may result in product failure.

APPLICATION

Test the sealer in an inconspicuous area to ensure the desired coverage and appearance is achieved. The mixed material can be applied by brush or roller. Workable time is about 3 hours. Maintain temperatures within the recommended ranges during the application and curing process. Properly prime the substrate with the Epoxy 325. It is best to maintain a wet edge to avoid roller marks. Direct sunlight or high temperatures may cause visible roller marking during application. Too thick of an application may result in product failure. Exposure to certain types of lighting such as sodium vapor lights may cause the product to discolor. Applications with relative humidity higher than 90% and/or poor air circulation may cause improper cure and surface tackiness. When the end of the pot life has been reached, you will find that the material becomes hard to apply and will actually tend to roll back up onto the roller. Do not try to continue application when the coating has reached this step. Applications made at different times with differing environmental conditions, may show slight variations in gloss. Coverage is approximately 350 sq. ft. per gallon. Make sure you test the surface for dryness prior to use and allow at least 14 hours before walking. A full cure will take up to 5 days to complete.

RECOATING/TOPCOATING

Multiple coats of this product are acceptable. If you opt to recoat this product, you must first be sure that all of the solvents have evaporated from the coating during the curing process. It is best to test the coating before recoating or topcoating. This can be done by pressing on the coating with your thumb to verify that no fingerprint impression is left. If no impression is created, then the recoat can be started. Always remember that colder temperatures will require more cure time for the product before recoating can commence. Before recoating or topcoating, check the coating to insure no contaminants exist. If a blush or contaminants



TECHNICAL DATA SHEET

are present on a previous coat, remove with a standard detergent cleaner. When recoating this product with subsequent coats of the urethane, it is advisable to apply the recoat before 24 hours passes. Also, it is advisable to degloss the previous coat to ensure a trouble free bond.

APPLICATION NOTES:

- Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured. It is best to let the floor remain dry for the full cure cycle. Dependent on actual complete system application, surface may be slippery, especially when wet or contaminated; keep surface clean and dry.
- Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.
- Colors or clarity for clear may be affected by high humidity, low temperatures, or chemical exposure
- For best results use a high quality 3/8" nap roller.
- Slab on grade requires moisture barrier.
- Substrate temperature must be 5°F above dew point.
- All new concrete must be cured for at least 28 days.
- Colors may vary from batch to batch, therefore, use only product from the same batch for an entire job.
- Improper mixing or too thick of an application may result in product failure.
- Light or bright colors (white, etc.) may require multiple coats or a suitable color coordinated primer to achieve a satisfactory hide.
- Tire contact may cause discoloration or staining.

TECHNICAL SPECS

- Feature: Durable Coating
- Chemistry: Aliphatic Urethane
- Color: Clear, tile red, beige, medium gray, light gray, off white, white
- Finish: High gloss
- Category: Coating
- Carrier: Solvent
- Availability: 2 component kit
- Packaging: 1.5 Gallon Kit, 3 Gallon Kit
- Coverage: 350 sq. ft. per gallon
- Interior/Exterior: Interior
- Application Method: Roller/brush
- Application Temperature: 45 F - 90 F
- Number of Coats: 1
- New Concrete: Yes, at least 28 days after being poured
- Storage/Shelf Life: 1 Year
- Clean up: Ketone solvents
- VOC Content: 335 g/L
- Hardness: Shore D 65
- Impact Resistance: 160 in/lb



TECHNICAL DATA SHEET

- Abrasion Resistance: 20 mg
- Adhesion: 350 psi
- Viscosity: 400 cps
- Primer: Epoxy 325

CURE TIMES: (70F)

Pot Life – 1.5 – gallon volume: 2-4 hours

Tack Free (dry to touch): 3-5 hours

Recoat or Topcoat: 5-9 hours

Light Foot Traffic: 14-24 hours

Full Cure (Heavy Traffic): 3-5 days

CHEMICAL RESISTANCE

10% Sodium Hydroxide: Long Term Immersion

10% Sulfuric: Short Term Immersion

10% Hydrochloric Acid: Long Term Splash Spill

20% Nitric Acid: Short Term Splash Spill

50% Sodium Hydroxide: Short Term Immersion

Acetic Acid 5%: Short Term Immersion

Ethylene Glycol: Short Term Immersion

Gasoline: Short Term Immersion

Mek: Not Recommended

Methyl Alcohol: Short Term Splash Spill

Xylene: Short Term Immersion

WARRANTY/LIMITATIONS OF LIABILITY

We warrant that our products are manufactured to strict quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular purpose. Any use or application other than recommended herein is the sole responsibility of the user. Listed physical properties are typical and should not be construed as specifications. No warranty is made, expressed or implied, regarding such other information, the data on which it is based, or the results you will obtain from its use. No warranty is made, expressed or implied, that our product shall be merchantable or that our product shall be fit for any particular purpose. No warranty is made that the use of such information or our product will not infringe upon any patent. We shall have no liability for incidental or consequential damages, direct or indirect. Our liability is limited to the net selling price of our product or the replacement of our product, at our option. Acceptance of delivery of our product means that you have accepted the terms of this warranty whether or not purchase orders or other documents state terms that vary from this warranty. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sale of our products. Our products contain chemicals that may cause serious physical injury. Before using, read the Safety Data Sheet and follow all precautions to prevent bodily harm.